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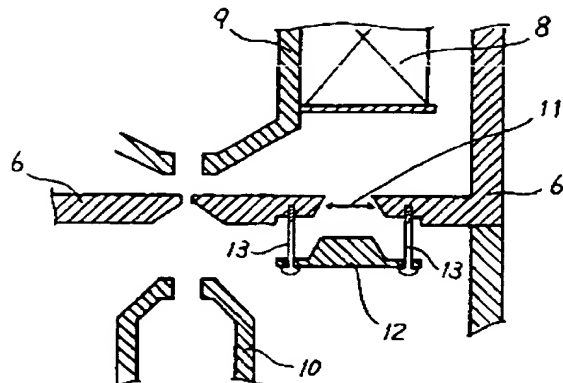
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TITLE : ION SOURCE OF CHARGED
PARTICLE BEAM APPARATUS



ABSTRACT : PURPOSE: To make it possible to exhaust remaining gas staying in a discharge room by an exhaust apparatus connecting to an analysis room by arranging an exhaust hole whose diameter is larger than that of an orifice and a stopper, a part of which is made by a magnetic material for closing the exhaust hole.

CONSTITUTION: An exhaust apparatus is formed as the one connecting to an analysis room, and an anode 6 is provided with an exhaust hole 11 different from an orifice and a stopper 12 for closing the exhaust hole 11, all or a part of which is made of a magnetic material. When the apparatus in the caption works as a duo-plasma ion source, the stopper 12 is attracted by magnetic force of an electromagnet 8 generated in the exhaust hole 11 arranged in the anode 6 to close the exhaust hole 11. Then, when magnetic field generated by the electromagnet 8 is erased to demagnetize the anode 6, the stopper 12 closing the exhaust hole 11 falls to the analysis room side along a guide pin 13 made of a non-magnetic material to open the exhaust hole 11. Accordingly, the remaining gas in a discharge room passes through the exhaust hole 11 and is exhausted by the exhaust apparatus connecting to the analysis room.

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